

REMARKS

Claims 1-21 are pending in the instant application with claim 1 in independent form. Claim 1 is herein amended to remedy a 35 U.S.C. 112¶2 indefiniteness rejection, to further define the amount of the vinyl-polymerizable compounds (A2) used to form the acrylic copolymer, and to clarify that the vinyl-polymerizable compounds are selected from a particular *Markush* group where it is clear that none of the *Markush* constituents include hydroxyl or epoxy groups. Support for these amendments is found at least in paragraphs [0007] and [0010] of the specification as originally filed. Claims 5, 12, and 13 are herein amended merely to correct 35 U.S.C. 112¶2 indefiniteness rejections in accordance with amended claim 1.

Pending Claim Rejections:

Claims 1-21 stand rejected under 35 U.S.C. §112¶2 as being indefinite because it is not clear what the claim terminology “types” and/or “type” refer to.

Claims 1-6, 8-14, 16, and 18-21 stand rejected under 35 U.S.C. §102 as anticipated by JP 10-101765 (JP765). Claims 1, 2, 5, 6, 8, 9, 12-14, 16, and 18-21 also stand rejected under §102 as anticipated by JP 04-103668 (JP668).

Claims 7, 15, and 17 stand rejected under 35 U.S.C. §102 as anticipated by, or in the alternative as obvious over JP765. Claims 7, 15, and 17 also stand rejected under 35 U.S.C. §102 as anticipated by, or in the alternative as obvious over JP668. The Applicants respectfully submit that the amended claims are definite and are both novel and non-obvious over both JP765 and JP668 both individually and in combination.

Distinction of Instant Invention over JP 10-101765:

JP765 discloses a curable resin composition that includes a silicone-modified vinyl polymer having a vinyl polymer chain as a main chain and having side chains including polysiloxane, hydrolyzable silyl, hydroxyl, and carboxyl groups, at least one C1-C6 hydroxylic solvent (e.g.

isopropyl alcohol), and an isocyanate compound. This curable resin composition is cured by the reaction between the hydroxyl groups of the side chains and the isocyanate compound (see at least paragraphs [0026] and [0040] of JP765). This hydroxyl-isocyanate curing reaction is very different from the radical polymerization reaction that is used to form the (A) acrylic copolymer as claimed. The hydroxyl-isocyanate curing reaction of JP765 is also very different from any sort of condensation and cross-linking reactions of alkenyloxysilyl groups and alkoxysilyl groups of the (A) acrylic copolymer in the presence of the (B) condensation-reaction accelerating catalyst which is also claimed and which reaction is described in detail in paragraphs [0012] and [0017] of the specification as originally filed.

More specifically, the coating agent composition that is claimed in claim 1 is cured by condensation and cross-linking of the alkenyloxysilyl groups and alkoxysilyl groups of component (A) as described immediately above and as set forth in claim 1 and paragraphs [0012] and [0017]. In the amended claims, the Applicants have made clear that the vinyl-polymerizable compounds (A2) are selected from specific *Markush* constituents, none of which include hydroxyl groups. As such, it is clear that the coating agent composition of the claimed invention does not cure through any sort of similar hydroxyl-isocyanate reaction as utilized in JP675 and thus is quite different from the curable resin composition of JP765. For these reasons, the Applicants respectfully assert that JP765 does not disclose each and every element of the pending claims. Said differently, the pending claims are novel over JP765.

Relative to the pending obviousness rejections of dependent claims 7, 15, and 17, and also relative to any possible obviousness rejections of claim 1 as amended, JP765 fails to disclose, teach, or even suggest each and every element of the pending claims and thereby fails to render these claims obvious. As described above, JP765 utilizes a curing reaction between hydroxyl groups and

the isocyanate compound which is, once again, very different from the radical polymerization reactions and condensation and cross-linking reactions of alkenyloxysilyl groups and alkoxysilyl groups of the instant invention. In fact, Comparative Example 3 of JP765 demonstrates that use of a tin-catalyst to effect a condensation reaction of its reactants produces a coating layer that has insufficient durability. In other words, use of a tin-catalyst to cure the curable resin composition of JP765 using a condensation reaction does not produce adequate results. This makes sense because JP765 does not describe any improvement of water-repellent properties through use of its curable resin composition and such a condensation reaction.

In addition to disparaging use of condensation reactions in Comparative Example 3, JP765 also teaches away from the instant invention relative to amounts of vinyl polymerizable compounds (such as (A2) of the instant invention) that can be used. As set forth in at least paragraph [0024], JP765 teaches reacting a silane compound and 1-25 wt % of a monomer to form a curable resin composition. However, in this same paragraph, JP765 expressly teaches that when the weight percent of the monomer exceeds 30 wt %, the preservation stability of the curable resin composition fails. This is in direct contrast to the instant invention. In the instant claims, the 100 parts by weight of a silane compound (A1) is reacted with 80 to 150 parts by weight of one or more vinyl-polymerizable compounds (A2), and 10 to 50 parts by weight of a siloxysilane compound (A3). The amounts of (A1-A3) that are specifically recited in amended claim 1 make it clear that the one or more vinyl-polymerizable compounds (A2) are present in an amount of greater than 30 wt % of the silane compound (A1) and also of the sum of silane compounds (A1 and A3). Accordingly, it is clear that JP765 teaches away from this invention. In other words, the amount of vinyl-polymerizable compounds (A2) used in this invention is detrimental to, and thus could not be used

in, JP765. For the aforementioned reasons, the Applicants respectfully submit that the amended claims are both novel and non-obvious over JP765.

Distinction of Instant Invention over JP 04-103668:

JP668 discloses a curable resin composition and a curing catalyst. The curable resin composition has one or more silane groups, epoxy groups, and hydroxyl groups. However, it is clear from the disclosure of JP668 that the epoxy groups play a lead role in curing the resin composition. More specifically, on page 586 of JP668, this reference explains that it is preferred to use a monomer that has alicyclic epoxy group content to cure the resin composition. In addition, the Examples of JP668 rely extensively on use of vinyl monomers that have alicyclic epoxy groups. It is well known in the art that epoxy groups react with hydroxyl groups and cross-link.

In the amended claims, the Applicants have made clear that the vinyl-polymerizable compounds are selected from a particular *Markush* group wherein none of the *Markush* constituents include hydroxyl or epoxy groups and thus the instant invention cannot cure through any sort of similar hydroxyl-epoxy reaction as utilized in JP668. For these reasons, the Applicants respectfully assert that JP668 does not disclose each and every element of the pending claims. Said differently, the pending claims are novel over JP668.

Relative to the pending obviousness rejections of dependent claims 7, 15, and 17, and also relative to any possible obviousness rejections of claim 1 as amended, JP668 relies on the reaction of epoxy groups and hydroxy groups to cure the curable resin composition, as described above. In this curing reaction, the epoxy groups react with the hydroxyl groups to form an additional hydroxyl group and increase the hydrophilicity of the cured resin composition. The component (A2), as recited in amended claim 1, is selected from a *Markush* group where it is clear that none of the *Markush* constituents include hydroxyl or epoxy groups and thus cannot react by the same or any

similar epoxy-hydroxy mechanism as is described above. Accordingly, it is clear that JP668 does not disclose, teach, or suggest each and every element of the pending claims, as amended. Thus, the Applicants respectfully submit that the amended claims are both novel and non-obvious over JP668.

Conclusion

The Applicants respectfully assert that the amended claims are both novel and non-obvious over the prior art cited by the Examiner. As such, the Applicants respectfully request that each of the claim rejections be withdrawn and that all pending claims be allowed. While it is believed that no further fees are presently due, the Commissioner is authorized to charge the Deposit Account No. 08-2789, in the name of Howard & Howard Attorneys PLLC for any fees or credit the account for any overpayment.

Respectfully submitted,

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